

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0055085; AI 19787; PER20060001** to discharge to waters of the State of Louisiana as per LAC 33:IX.2311.

The permitting authority for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** Town of Duson
Sewage Treatment Plant
Post Office Box 10
Duson, Louisiana 70529
- II. **PREPARED BY:** Todd Franklin
- DATE PREPARED:** March 19, 2007
- III. **PERMIT ACTION:** reissue LPDES permit LA0055085, AI 19787; PER20060001

LPDES application received: September 1, 2006

EPA has not retained enforcement authority.

Previous LPDES permit effective: March 1, 2002

Previous LPDES permit expires: February 28, 2007

The permit application requests that the permit reflects an increase of the design capacity of the wastewater treatment plant from 0.214 MGD to 0.34 MGD. This upgrade was put in place to address the more stringent limitations placed into the previous permit.

IV. **FACILITY INFORMATION:**

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the Town of Duson.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located on Betty Ann Street in Duson, Lafayette Parish.
- D. The treatment facility consists of bar screens and grit removal; then the wastewater is directed into a Biolac Extended Aeration Basin; the partially treated water then enters the dual clarifiers. Disinfection occurs in the chlorine contact chamber.
- E. Outfall 001

Discharge Location: Latitude 30° 13' 54" North
 Longitude 92° 11' 13" West

Description: treated sanitary wastewater

Design Capacity: 0.34 MGD

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

V. RECEIVING WATERS:

The discharge is into Bayou Queue de Tortue; thence into the Mermentau River in Subsegment 050501 of the Mermentau River Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Subsegment 050501 of the Mermentau River Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment	Degree of Support of Each Use						
Partial	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Full	Full	Not Supported	N/A	N/A	N/A	Full

^{1/}The designated uses and degree of support for Subsegment 050501 of the Mermentau River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 050501 of the Mermentau River Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006, from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for

a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mr. Todd Franklin
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX.

PROPOSED PERMIT LIMITS:

Subsegment 050501, Bayou Queue de Tortue-headwaters to Mermentau River, is listed on LDEQ's Final 2004 303(d) list as impaired for mercury. Although TMDL's for the Mermentau River Basin were due to be completed by 1999, a TMDL has not yet been developed for mercury for this waterbody. A TMDL will be scheduled following completion of the EPA Consent Decree TMDL schedule. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a future TMDL.

To protect against the discharge of mercury which will cause or contribute to the mercury impairment found in the receiving stream, language shall be placed into the permit requiring the permittee to take appropriate measures to minimize the discharge of mercury.

Subsegment 050501 was previously listed as impaired for phosphorus, nitrogen, organic enrichment, low DO, suspended solids, turbidity, siltation, TDS, and Fipronil, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 050501:

Bayou Queue de Tortue Watershed TMDL for Dissolved Oxygen and Nutrients Including a Point Source Wasteload Allocation for the City of Duson STP and a Watershed Nonpoint Source Load Allocation

As per the TMDL, it is projected that compliance with dissolved oxygen criteria will require monthly average limitations for the City of Duson STP discharge to be 10 mg/l CBOD₅, 5 mg/l NH₃-N, and 6 mg/l minimum DO for the months of March through November and 30 mg/l CBOD₅, 15 NH₃-N, and 5 mg/l minimum DO for the Months of December through February.

This TMDL, however, was based on a flow 0.269 MGD. The proposed increase in flow will be 0.34

MGD. This increase in flow will exceed the loading granted in the Margin of Safety. However, the TMDL set the minimum summer DO level at 3.3 mg/l. The criteria for Subsegment 050501 is 3.0 mg/l according to LAC 33:IX.1123. Therefore, some excess capacity beyond the Margin of Safety is allowable for this municipality. Therefore, the limitations listed above shall be continued for this facility.

TMDL for TSS, Turbidity, and Siltation for the Mermentau River Basin

As per the TMDL,

Point Sources do not represent a significant source of TSS as defined in this TMDL.

Point Sources discharge primarily organic TSS, which does not contribute to habitat impairment resulting from sedimentation. Because the point sources are minor contributors and discharges of organic suspended solids from point sources are already addressed by LDEQ through their permitting of point sources to maintain water quality standards for DO, the wasteload allocations for point source contributions were set to zero. This TMDL only addresses the landform contribution of TSS / sediment and does not address the insignificant point source contributions.

Therefore, TSS limitations are being placed into the permit according to the current state policy.

Bayou Queue de Tortue Watershed TMDL for Turbidity

"The TMDL calls for all sources of turbidity to the bayou to meet the 150 NTU turbidity guideline. This guideline is to be applied equally to point and nonpoint sources." Therefore, limitations for turbidity shall be placed into the permit.

Bayou Queue de Tortue Watershed TMDL for Total Dissolved Solids (TDS)

"This TMDL calls for all sources of TDS to the bayou to meet the 260 mg/l TDS water quality standard. This water quality standard for TDS is to be applied equally to point and nonpoint sources." Therefore, limitations for TDS shall be placed into the permit. Interim limitations shall be placed into the permit for up to six years from the effective date of the TMDL (April 25, 2003). "Report" for TDS shall be placed into the permit during the interim period.

TMDL for the Pesticide Fipronil in the Mermentau River Basin

As per the TMDL,

There are no known point sources for fipronil in the Mermentau River Basin. Effluent from several hundred other point source dischargers in the Mermentau River Basin is not expected to contain fipronil because its use is limited to rice farming. Therefore, concentrations of fipronil in their effluents are not expected and would be considered an enforcement issue and dealt with accordingly.

Therefore, limitations for fipronil are not necessary for this permit.

Interim Effluent Limits:**Outfall 001**

Interim limits are being proposed to allow the facility time to meet the proposed limitations for Total Dissolved Solids.

Interim limits shall begin the effective date of the permit and expire on April 24, 2009 (six years from the effective date of the TMDL).

All requirements and conditions found in the final effluent limits shall apply in the interim period, with the exception of the requirements for Total Dissolved Solids. During the interim period, the facility will only have a reporting requirement to allow the facility time to gather information and adjust the plant accordingly.

Effluent Characteristics	Monthly Average (lbs/day)	Basis
Total Dissolved Solids (TDS)	Report	A TDS limit shall be required for this facility according to the <i>Bayou Queue de Tortue Watershed TMDL for Total Dissolved Solids (TDS)</i> . Therefore, in the interim period, a reporting requirement is proposed for informational gathering purposes.

Final Effluent Limits:**Outfall 001**

Limits shall become effective on April 25, 2009 and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅				Limits are set in accordance with the <i>Bayou Queue de Tortue Watershed TMDL for Dissolved Oxygen Including a Point Source Wasteload Allocation for the City of Duson STP and Watershed Nonpoint Source Load Allocation</i> .
March – November	28	10 mg/l	15 mg/l	
December - February	85	30 mg/l	45 mg/l	
TSS	43	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS

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Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
				effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen				Limits are set in accordance with the <i>Bayou Queue Do Tortue Watershed TMDL for Dissolved Oxygen Including a Point Source Wasteload Allocation for the City of Duson STP and Watershed Nonpoint Source Load Allocation</i> .
March – November	14	5 mg/l	10 mg/l	
December - February	43	15 mg/l	30 mg/l	
Dissolved Oxygen (DO)				Limits are set in accordance with the <i>Bayou Queue Do Tortue Watershed TMDL for Dissolved Oxygen Including a Point Source Wasteload Allocation for the City of Duson STP and Watershed Nonpoint Source Load Allocation</i> .
March – November	N/A*	6 mg/l	N/A	
December - February	N/A*	5 mg/l	N/A	
Turbidity	---	150 NTU	---	Limits are set in accordance with the <i>Bayou Queue de Tortue Watershed TMDL for Turbidity</i> .
Total Dissolved Solids (TDS)	737	---	---	Limits are set in accordance with the <i>Bayou Queue de Tortue Watershed TMDL for Total Dissolved Solids (TDS)</i> .

*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml

(Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.).

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X.

PREVIOUS PERMITS:

LPDES Permit No. LA0055085: Effective: March 1, 2002
Expired: February 28, 2007

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
CBOD ₅				
March - November	10 mg/l	15 mg/l	2/month	Grab
December - February	30 mg/l	45 mg/l	2/month	Grab
TSS	15 mg/l	23 mg/l	2/month	Grab
NH ₃ -N	5 mg/l	10 mg/l	2/month	Grab
Dissolved Oxygen				
March - November	6 mg/l	---	2/month	Grab
December - February	5 mg/l	---	2/month	Grab
Fecal Coliform				
Colonies/100 ml	200	400	2/month	Grab
pH	Range (6.0 su - 9.0 su)		2/month	Grab

XI.

ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following most recent inspection performed for this facility.

Date - November 17, 2005

Inspector - LDEQ

Findings and/or Violations -

1. The lab analysis forms were reviewed and found to be in order.
2. All treatment units were operating at the time of the inspection with no areas of concern noted. A thermometer was not present in the refrigerator that is used to hold samples but the facility personnel stated that this problem would be corrected. Hydraulic overloads occur at the plant due to I&I problems in the

collection system. The has conducted smoke testing and repaired lines to help with the I&I problem.

3. Samples are being taken at the appropriate times and at the specified location.
4. Two channels are present in the chlorine contact chamber that combine into one outfall point with each channel having a flow meter. A flow calculation check revealed a 13% error for meter #1 and an 8.2% error for meter #2. Facility personnel stated that they would have the meter checked as soon as someone could come out to check it.
5. The outfall was discharging at the time of the inspection and the discharge was clear with no foam or visible solids.

B) Compliance and/or Administrative Orders

A review of the files indicates that no recent enforcement actions have been administered against this facility.

C) DMR Review

A review of the discharge monitoring reports for the period beginning January 2005 through December 2006 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
Fecal Coliform, Weekly Avg.	001	July 2005	400 cfu/100 ml	>1,000 cfu/100 ml
NH ₃ -N, Weekly Avg.	001	April 2006	10 mg/l	12.8 mg/l

XII. ADDITIONAL INFORMATION:

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.34 MGD.

Effluent loadings are calculated using the following example:

$$\text{CBOD}_5: 8.34 \text{ lb/gal} \times 0.34 \text{ MGD} \times 10 \text{ mg/l} = 28 \text{ lbs/day}$$

At present, the Monitoring Requirements, Sample Types, and Frequency of Sampling as shown in the permit are standard for facilities of flows between 0.10 and 0.50 MGD.

Effluent Characteristics

Flow
CBOD₅

Monitoring Requirements

<u>Measurement</u>	<u>Sample</u>
<u>Frequency</u>	<u>Type</u>

Continuous	Recorder
2/month	Grab

Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Dissolved Oxygen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab
Turbidity	2/month	Grab
Total Dissolved Solids	2/month	Grab

In order to allow the permittee time to upgrade the facility to meet limitations imposed by a TMDL, **INTERIM LIMITS** are proposed for this facility.

The permittee shall achieve compliance with the **FINAL EFFLUENT LIMITATIONS** and **MONITORING REQUIREMENTS** as specified in accordance with the following schedule:

ACTIVITY	DATE
Achieve Interim Effluent Limitations and Monitoring Requirements	On the effective date of the permit
Achieve Final Effluent Limitations and Monitoring Requirements	On or before April 25, 2009

The above listed activities must be achieved on or before the deadline date. Additionally, the permittee shall submit a progress report outlining the status of all facility improvements on a yearly basis until compliance is achieved.

Within 14 days of completion of the new facility or facility upgrade and/or expansion, the Permittee shall notify the Department of Environmental Quality-Office of Environmental Services in writing that construction has been completed.

The Permittee shall achieve sustained compliance with Final Effluent Limitations.

Where the percent project completion reported is less than would be required to assure completion of necessary upgrades by the required date, the report of progress shall also include an explanation for this delay and proposed remedial actions.

No later than 14 days following a date for a specific action (as opposed to a report of progress), the permittee shall submit a written notice of compliance or noncompliance.

Pretreatment Requirements

Due to the absence of pretreatment categorical standards for the indirect discharges listed above or the discharge is of sanitary wastewater only, it is recommended that LDEQ Option 1 Pretreatment Language be included in LPDES Permit LA0055085.

This language is established for municipalities that do not have either an approved or required Pretreatment program. This recommendation is in accordance with 40 CFR Part 403 regulations, the General Pretreatment Regulations for Existing and New Sources of Pollution contained in LAC Title 33, Part IX, Chapter 61, and the Best Professional Judgement (BPJ) of the reviewer.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The

permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Town of Duson, Sewage Treatment Plant, September 1, 2006.